

# YUKON BUREAU OF STATISTICS

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## Yukon Energy Facts 2013

### Highlights:

- Yukon's 2013 electricity generation of 448,212 mega-watt hours (MWh) consisted of 424,720 MWh in hydro (94.8%), 23,215 MWh in thermal (5.2%) and 277 MWh in wind generation (0.1%).
- Of the 397,053 MWh of electricity sold in Yukon in 2013, sales to *non-residential* customers accounted for 59.1% and sales to *residential* customers accounted for 40.9%.

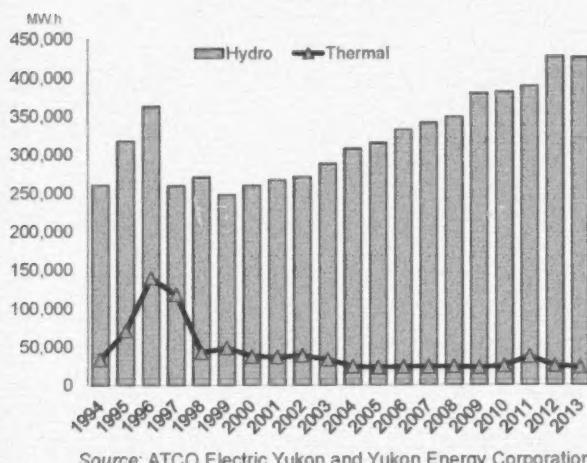
### Electricity Generation, Yukon, 2004 to 2013

	ATCO ELECTRIC YUKON			YUKON ENERGY CORPORATION			YUKON TOTAL			GRAND TOTAL	
	HYDRO	THERMAL	HYDRO	THERMAL	WIND	(MWh)	HYDRO	THERMAL	WIND		
2013	3,417	21,305	421,303	1,910	277	424,720	23,215	277	448,212		
2012	3,388	21,310	423,206	3,055	445	426,594	24,365	445	451,404		
2011	3,638	20,933	384,429	15,935*	402	388,067	36,868	402	425,337		
2010 (r)	3,388	19,839	377,043	5,127	85	380,431	24,966	85	405,482		
2009 (r)	8,094	19,966	370,962	2,645	238	379,056	22,611	238	401,905		
2008 (r)	6,551	22,065	341,742	1,662	437	348,293	23,727	437	372,457		
2007	9,025	22,334	331,226	1,247	362	340,251	23,581	362	364,194		
2006	6,950	21,804	324,473	1,694	605	331,423	23,498	605	355,526		
2005	6,858	21,807	307,717	580	890	314,575	22,387	890	337,852		
2004	5,799	21,988	301,038	1,705	477	306,837	23,693	477	331,007		

\* Reflects impact of additional diesel to accomodate capital projects of Mayo B and Aishihik Unit #3.  
Source: ATCO Electric Yukon and Yukon Energy Corporation.

**Hydro electricity:**  
Energy produced by utilizing the water flow in a river.  
**Thermal electricity:**  
Energy produced by generators run on petroleum products (e.g. diesel).  
**Wind electricity:**  
Wind generator at Haeckel Hill, Whitehorse, went into service in the fall of 1993. A second wind generator was added in October 2000.

### Hydro and Thermal Generation, Yukon, 1994 to 2013



Source: ATCO Electric Yukon and Yukon Energy Corporation.

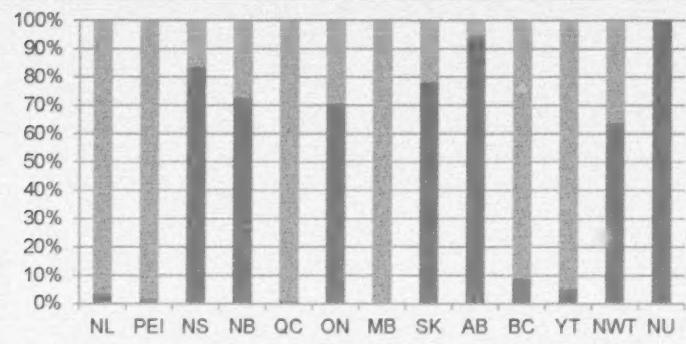
Type of Generation, 2013	Location	Ownership	Installed Generation Capacity (MW)
Hydroelectric generating facilities	Whitehorse (WAF) Aishihik Mayo	YEC YEC YEC	40.0 37.0 15.1
Hydro plant	Fish Lake	YECL	1.3
Wind turbines	Whitehorse	YEC	0.8
Diesel generating facilities	Whitehorse (WAF) Faro (WAF) Dawson Mayo	YEC YEC YEC YEC	23.0 8.5 5.1 2.5
Off-grid diesel generation facilities	Watson Lake Carmacks (WAF) Haines Junction (WAF) Teslin (WAF) Pelly Crossing Ross River (WAF) Beaver Creek Destruction Bay Old Crow Swift River Stewart Crossing	YECL YECL YECL YECL YECL YECL YECL YECL YECL YECL YECL YECL	5.0 1.5 1.5 1.5 1.2 1.0 0.9 0.9 0.7 0.3 0.1

WAF = Whitehorse Aishihik Faro line YEC = Yukon Energy Corporation

YECL = ATCO Electric Yukon

Source: Yukon Energy Corporation.

## Electricity by Type of Generation, Provinces and Territories, 2013

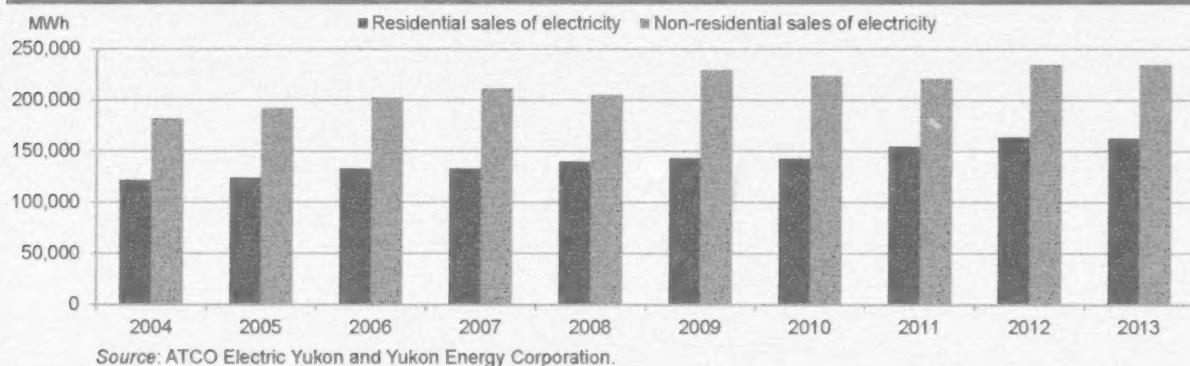


■ Total hydro, tidal, wind, solar and other generation ■ Thermal generation

Source: Statistics Canada, CANSIM 127-0007.

According to Statistics Canada, hydro and wind generation accounted for 94.8% of Yukon's total electricity generation in 2013. The remaining 5.2% was from thermal generation. Yukon ranked the fifth highest in the hydro, tidal, wind, solar and other generation category, and the fifth lowest in thermal generation.

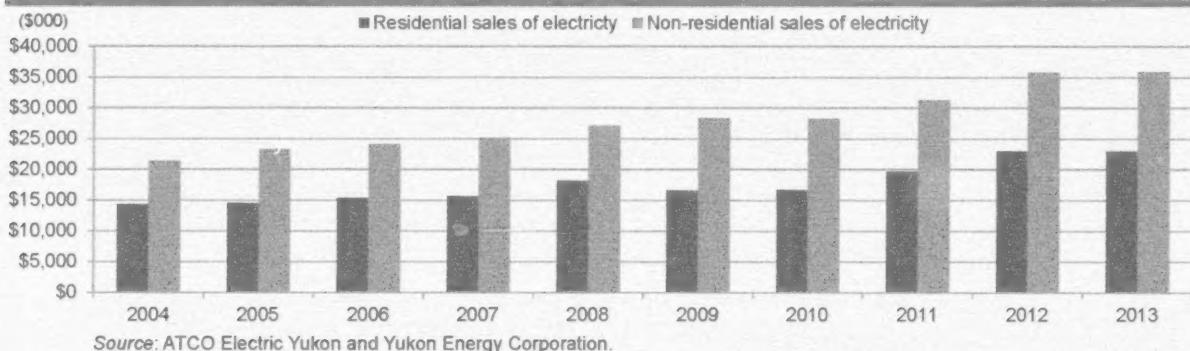
## Electricity Distribution (MWh), Yukon, 2004 to 2013



Source: ATCO Electric Yukon and Yukon Energy Corporation.

- Of the 397,953 MWh of electricity sold in Yukon in 2013, sales to *non-residential* customers accounted for 59.1% (234,680 MWh), and sales to *residential* customers accounted for 40.9% (162,373 MWh).
- Compared to 2012, both *non-residential* sales and *residential* sales remained relatively flat with small decreases of -0.01% and -0.8%, respectively.

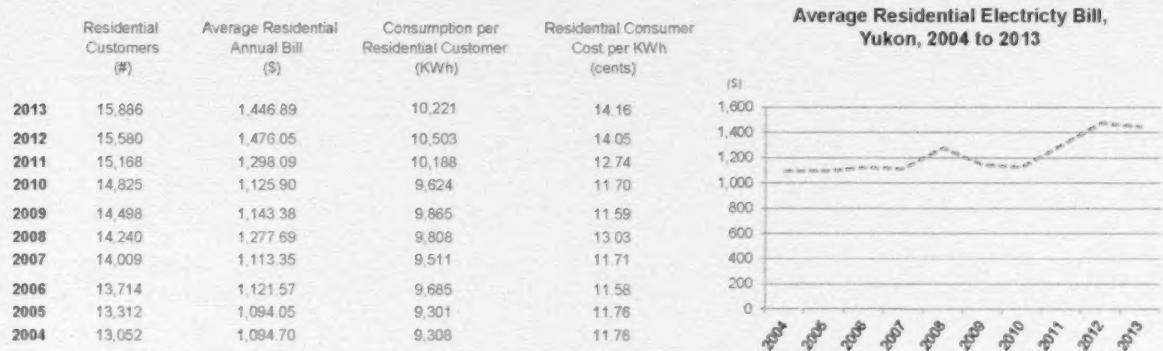
## Electricity Sales (\$000), Yukon, 2004 to 2013



Source: ATCO Electric Yukon and Yukon Energy Corporation.

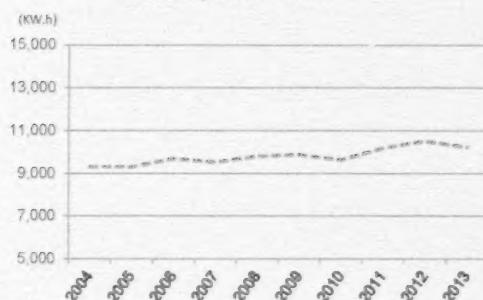
- Sales of electricity to ultimate customers in 2013 totalled \$58.9 million; an increase of \$86,000, or 0.1%, compared to 2012.
- Compared to 2012, sales to *non-residential* customers (\$36.0 million) in 2013 increased by \$98,000, or 0.3%, while sales to *residential* customers (\$23.0 million) decreased by \$12,000, or 0.1%.

## Residential Electricity Cost and Consumption, Yukon

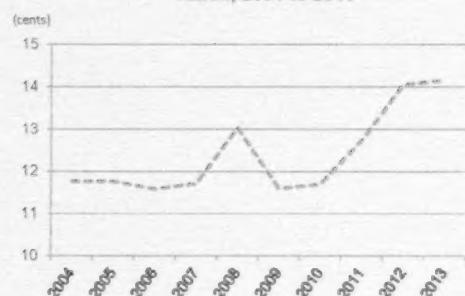


- In 2013, the average residential annual electricity bill in Yukon was \$1,446.89, a decrease of \$29.16, or 2.0%, from 2012, and an increase of \$352.19, or 32.2% compared to 2004.
- Over the past ten years, Yukon residential customers consumed an average of 9,801 KWh of electricity annually.
- In 2013, the residential electrical consumer cost per KWh in Yukon was \$0.14, an increase of \$0.10, or 0.7%, from 2012, and an increase of \$2.39, or 20.4% compared to 2004.

Consumption (KWh) per Residential Customer, Yukon, 2004 to 2013

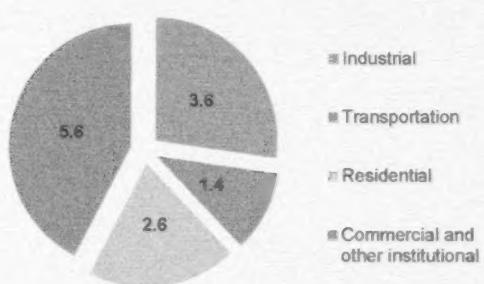


Residential Consumer Cost per KWh, Yukon, 2004 to 2013

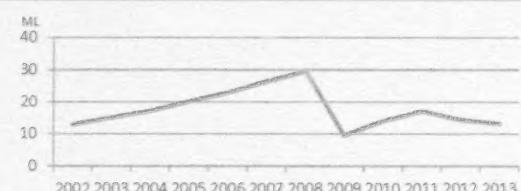


Source: ATCO Electric Yukon and Yukon Energy Corporation.

## Final Demand for Propane (Megalitres), Yukon, 2013



Source: Statistics Canada, CANSIM 128-0012.



In 2013, 13.2 megalitres of propane were consumed in Yukon. Of the total consumption, 42.4% was in Commercial and other institutional; 27.3% in Industrial; 19.7% in Residential; and 10.6% in Transportation.

## Principal Heating Equipment and Heating Fuel, Territories, 2012

	Yukon	NWT	Nunavut
----- % -----			
<b>Principal Heating Equipment</b>			
Steam or hot water furnaces <sup>1</sup>	F	30.5	52.8
Hot air furnaces <sup>2</sup>	58.0	56.4	39.4
Heating Stoves <sup>3</sup>	15.7	F	F
Electric Heating <sup>4</sup>	17.9	F	F
Other <sup>5</sup>	F	F	F
<b>Age of Principal Heating Equipment</b>			
5 years old and under	23.7	29.6	F
6 to 10 years old	27.7	26.0	21.1
Over 10 years old	48.6	44.4	61.2
<b>Principal Heating Fuel</b>			
Oil or other liquid fuel	59.4	59.7	94.3
Natural gas	F	F	F
Propane	F	16.2	F
Electricity	18.2	F	F
Wood	15.0	F	F
Other	F	F	F

F = too unreliable to publish.

<sup>1</sup> Steam or hot water systems distribute central heating through radiators located throughout the house and connected by pressure pipes.

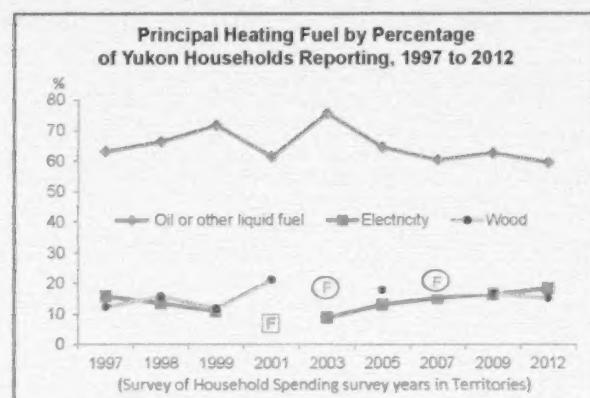
<sup>2</sup> Hot air furnaces distribute central heating by a motor-driven fan through vents located throughout the dwelling.

<sup>3</sup> Heating stoves are localized heating units with no central distribution system to other parts of the house (e.g., oil space heater, gas space heater, wood stoves).

<sup>4</sup> Electric heating includes permanently installed baseboard electric heating and other types such as floor or ceiling heating wires in all or most rooms.

<sup>5</sup> Other heating includes cookstoves and any other type of heating equipment not listed above.

Source: Statistics Canada, CANSIM 203-0031.



In 2012, 59.4% of Yukon households used oil or other liquid fuel as their principal heating fuel, 18.2% used electricity, while 15.0% used wood as their primary heating source. Hot air furnaces (58.0%) were the most common principal heating equipment in Yukon in 2012, followed by electric heating (17.9%) and heating stoves (15.7%).

## Median Expenditure per Household Reporting, Selected Energy Components, Territories, 2012

	YT	NWT	NU
----- \$ -----			
<b>Shelter Expenditures<sup>1</sup></b>			
Electricity	1,400	2,275	960
Other fuels <sup>2</sup>	2,400	3,500	4,500
<b>Transportation Expenditures</b>			
Gas & other fuels (owned/leased vehicles)	2,700	2,760	2,500
Gas & other fuels (rented vehicles)	150	160	F
Gas & other fuels (recreational vehicles)	300	500	1,000

<sup>1</sup> For principal accommodation.

<sup>2</sup> For heating and cooking (example: oil, propane, wood)

F = Too unreliable to be published.

Source: Statistics Canada, CANSIM 203-0003 and 203-0030.

